

CLAIMS

1. A method of initiating a telecommunications uplink from a mobile terminal to a telecommunications network, the mobile terminal having a transmission chain including a baseband stage, a power amplification stage and an antenna, the method including the steps of:

(a) transmitting a preamble signal from the mobile terminal, the preamble signal being transmitted in accordance with a transmission parameter of the mobile terminal;

(b) determining whether a base station has successfully received the preamble signal and if so, establishing an uplink to the base station on the basis of the first transmission parameter;

(c) in the event it is not determined that a base station has successfully received the preamble signal, changing the transmission parameter, and repeating steps (a) and (b);

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing the transmission parameter in step (c) results in an alteration of the signal diversity of one or more preambles as received by the base station.

2. A method according to claim 1, wherein the transmission chain includes at least two antennae, and the transmission parameter determines which of the antennae the preamble is transmitted from.

3. A method according to claim 2, wherein the preamble is transmitted from only one of the antennae at a time.

4. A method according to claim 1 or 2, wherein the transmission parameter includes a frequency band, each preamble being transmitted via the frequency band indicated by the current transmission parameter.

5. A method according to any one of the preceding claims, wherein the transmission chain includes a plurality of antennae in an antenna array, and directionality of a beam formed by signals transmitted from the array is selected for each preamble transmission based on the transmission parameter.

6. A method according to claim 5, wherein the transmission chain includes a phase shifting means for shifting the phase of the signals supplied to the individual antennae in the antenna array, the phase shifters being controllable on the basis of the transmission parameter.

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7. A method according to any one of the preceding claims, wherein the uplink is established in accordance with the transmission parameter used when the base station successfully received the preamble.

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8. A method according to any one of the preceding claims, wherein the transmission parameter includes a power level at which each preamble is transmitted, the power level being increased between at least some sequentially adjacent preamble transmissions.

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9. A mobile telecommunications terminal configured to initiate a telecommunications uplink to a telecommunications network, the mobile terminal having a transmission chain including a baseband stage, a power amplification stage and an antenna and being configured to:

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(a) transmit a preamble signal in accordance with a transmission parameter of the mobile terminal;

(b) determine whether a base station has successfully received the preamble signal and if so, to establish an uplink to the base station on the basis of the first transmission parameter;

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(c) in the event it is not determined that a base station has successfully received the preamble signal, change the transmission parameter, and repeat (a) and (b);

wherein the transmission parameter controls one or more of the baseband stage, power amplification stages and the antenna such that changing of the transmission parameter in (c) results in an alteration of the signal diversity of one or more subsequent preambles as received by the base station.

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10. A mobile telecommunications terminal according to claim 9, wherein the transmission chain includes at least two antennae, and the transmission parameter determines which of the antennae the preamble is transmitted from.

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11. A mobile telecommunications terminal according to claim 10, wherein the preamble is transmitted from only one of the antennae at a time.

12. A mobile telecommunications terminal according to claim 9 or 10, wherein the transmission parameter includes a frequency band, each preamble being transmitted via the frequency band indicated by the current transmission parameter.
- 5 13. A mobile telecommunications terminal according to any one of claims 9 to 12, wherein the transmission chain includes a plurality of antennae in an antenna array, and directionality of a beam formed by signals transmitted from the array is selected for each preamble transmission based on the transmission parameter.
- 10 14. A mobile telecommunications terminal according to claim 13, wherein the transmission chain includes a phase shifting means for shifting the phase of the signals supplied to the individual antennae in the antenna array, the phase shifters being controllable on the basis of the transmission parameter.
- 15 15. A mobile telecommunications terminal according to any one of claims 9 to 14, wherein the uplink is established in accordance with the transmission parameter used when the base station successfully received the preamble.
- 20 16. A mobile telecommunications terminal according to any one of claims 9 to 15, wherein the transmission parameter includes a power level at which each preamble is transmitted, the power level being increased between at least some sequentially adjacent preamble transmissions.